

calculation of multi-use building

Potential Cost Savings are below in rows 24 to 37

2,000 sq. ft. Option 4

Drawing Scale

width length
2.00 in 3.25 in

Allocation of Trade Costs

Space Dimensions on Plan				Est. of Savings	
	width	length	total	alloc %	Alloc Trade \$
total building					
Base Estimate	in sq. ft.		2000 sq. ft.	100%	\$ 530,000
Scale Plan	in inches	2.00 in	3.25 in	6.5 sq. in.	
Concession	2.00 in	0.875 in	1.75 sq. in.	26.92%	\$ 142,692
Restrooms	2.00 in	1.75 in	3.50 sq. in.	53.85%	\$ 285,385
Storage Area	1.375 in	0.625 in	0.86 sq. in.	13.22%	\$ 70,072
Mech Rm	0.625 in	0.625 in	0.39 in	6.01%	\$ 31,851
Total Building			6.5 sq. in.	100%	\$ 530,000

Potential Savings						
Potential Savings						
	Multi-Purpose Bldg	Conc+Storage	Press Box	Track	Baseball Fields	Total Possible Savings
Building Trade Cost	\$ 530,000	\$ 212,764	\$ 225,000	\$ 693,000	\$ 510,600	\$ 1,641,364
Allocation of % Generated general costs	cf. ft 1 29% \$ 152,110	\$ 61,063	\$ 64,575	\$ 198,891	\$ 146,542	\$ 471,072
Total Cost of Construction	\$ 682,110	\$ 273,828	\$ 289,575	\$ 891,891	\$ 657,142	\$ 2,112,436
Additional % Generated General Costs	cf. ft. 2 13% \$ 68,902	\$ 27,660	\$ 29,251	\$ 90,093	\$ 66,380	\$ 213,384
Cost needed to resurface Track				\$ (300,000)		\$ (300,000)
Cooking Equipment Consultant	\$ -	\$ 5,000	\$ -			\$ 5,000
Total Varied Cost of Multipurpose Bldg	\$ 751,012	\$ 306,488	\$ 318,826	\$ 681,984	\$ 723,522	\$ 2,030,820

footnotes:

1. The allocation of 29% for generated general costs is found on line 62 of the spreadsheet titled "Detailed costs"
2. The allocation of 13% for additional generated general costs is found on line 70 of the spreadsheet titled "Detailed costs"

Details of Athletic Field Project Cost Breakdown
per Ellanna Construction Cost Consultants [via ASRSD]

New 2019 Plan Option 4					Original 2018 plan w/o sod Option 1				
Description	factor 1	factor 2	Rate	Cost	factor 2	Rate	Cost		
New Construction				\$ 789,000			\$ 998,000		
Program Areas		2,500		\$ 789,000	3,000		\$ 998,000		
Aluminum Bleachers		400	\$ 85.00	\$ 34,000	500	\$ 86.00	\$ 43,000		
Multipurpose/Concession Bldg		2,000	\$ 265.00	\$ 530,000	2,500	\$ 250.00	\$ 625,000		
Ticket Booth		-	\$ 300.00	\$ -	100	\$ 300.00	\$ 30,000		
Press Box w ramp		400	\$ 562.50	\$ 225,000	400	\$ 750.00	\$ 300,000	inc elevator	
Site				\$ 3,844,600			\$ 5,500,400		
Demolition and Earthworks				\$ 548,000			\$ 1,027,200		
Demolition: Paving	10,000	10,000	\$ 5.00	\$ 50,000	10,000	\$ 5.00	\$ 50,000		
Demolition - existing fields	1	1	\$ 125,900	\$ 125,900	1	\$ 241,300	\$ 241,300		
Clearing and Regrading Site	75,000	75,000	\$ 0.75	\$ 56,300	75,000	\$ 0.75	\$ 56,300		
Remove Topsoil & excavate site	589,100	589,100	\$ 0.20	\$ 117,800	448,177	\$ 0.20	\$ 89,600		
Imported Filling				\$ 125,000			\$ 375,000		
Rock Removal				\$ 50,000			\$ 150,000		
Unsuatbakke Soil Removal				\$ 23,000			\$ 65,000		
Baseball/softball				\$ 510,600			\$ 520,000		
Baseball Field				\$ -			\$ 176,100		
Baseball Infield				\$ 102,000			\$ 102,000		
Baseball outfield w/overlay soccer field				\$ 176,100			\$ -		
Softball Field				\$ -			\$ 75,100		
Softball infield				\$ 54,000			\$ 54,400		
Softball outfield				\$ 75,100			\$ -		
Baseball/Softball fences				\$ -			\$ 42,000		
Baseball /Softball fences dugouts				\$ 42,000			\$ -		
Field drainage system				\$ 30,000			\$ 30,600		
Field Irrigation system				\$ 31,400			\$ 39,800		
Football / Soccer				\$ 1,698,500			\$ 2,266,200		
Football / Soccer fields - new				\$ 806,300			\$ 806,300		
Athletic tracks - new				\$ 693,000			\$ 693,000		
Soccer fields - new				\$ -			\$ 326,700		
Scoreboard and storage				\$ 100,000			\$ 100,000		
Football/Aths area fence				\$ 75,000			\$ 75,000		
Field drainage system				\$ 24,200			\$ 75,800		
Field irrigation system				\$ -			\$ 189,400		
Description	factor 1	factor 2	Rate	Cost	factor 2	Rate	Cost		
Pathways and Lighting				\$ 440,000			\$ 695,000		
Concrete paths and curbing				\$ 200,000			\$ 200,000		
Concrete retaining walls				\$ 140,000			\$ 420,000		
Field/Path lighting				\$ 100,000			\$ 75,000		
General				\$ 322,500			\$ 342,000		
Landscaping and grassing				\$ 322,500			\$ 322,000		
Site drainage				\$ -			\$ -		
Landscape Irrigation system				\$ -			\$ -		
Trees				\$ -			\$ 20,000		
Utility Provisions				\$ 325,000			\$ 650,000		
Total Trade Costs				\$ 4,633,600			\$ 6,498,400		
Allocation of % Generated general costs			29%	\$ 1,329,843		29%	\$ 1,865,041		
General Conditions / Requirements/Bonds / Ins.			7.5%	\$ 347,520		7.5%	\$ 487,380		
Contractor's CH&P			5.0%	\$ 231,680		5.0%	\$ 324,920		
Design / Estimating Contingency		page says 10%	11.25%	\$ 521,280		page says 10%	\$ 731,070		
Escalation		page says 4%	4.9%	\$ 229,363		page says 4%	\$ 321,671		
Total Cost of Construction			84.4%	\$ 5,963,442		85.4%	\$ 8,363,441		
				<i>% of Const. Costs</i>					
Additional % Generated General Costs			13%	\$ 775,272		13.0%	\$ 1,087,247		
Construction Contingency			5.0%	\$ 298,172		5.0%	\$ 418,172		
Architect Fee			8.0%	\$ 477,100		8.0%	\$ 669,075		
Additional General Fixed Costs			5%	\$ 325,000			\$ 345,000		
FFE & Technology				\$ 30,000			\$ 30,000		
Additional Project Costs				\$ 295,000			\$ 315,000		
Surveying				\$ 30,000			\$ 30,000		
Geotech. Cons + Training				\$ 15,000			\$ 15,000		
Civil Engineering/Landscape				\$ 100,000			\$ 120,000		
Cooking Equipment Consultant				\$ 5,000			\$ 5,000		
Clerk of the Works				\$ 100,000			\$ 100,000		
Cost Estimating				\$ 30,000			\$ 30,000		
Testing & Monitoring at Construction				\$ 5,000			\$ 5,000		
Painting / Construction				\$ 5,000			\$ 5,000		
Legal				\$ 5,000			\$ 5,000		
Total Additional Costs			15.6%	\$ 1,100,272		14.6%	\$ 1,432,247		
Total Project Costs				\$ 7,063,715			\$ 9,795,689		

Athletic Field Project: Tracking of cost changes

Athletic Field Cost 2019 projection	\$ 11,854,554	\$ 11,570,554	
Savings due from elimination of SOD	\$ (2,058,896)	\$ 4,470,554	0.629655493
Subtotal	\$ 9,795,658		
Increased cost due to Inflation [4%]	\$ 284,000		
Proj Cost for 2018 vote	\$ 7,100,000		
Unexplained Variance	\$ 2,411,658		

		Updated 2019 Cost			
	2018	Opt 1	Opt 2	Opt 3	Opt 4*
Construction Costs		original plan w/o sod			
Track: [8 lane]	\$ 2,100,000				
Synthetic Turf Field:	\$ 1,500,000				
Bleachers:	\$ 420,000				
<i># Spectators</i>	500	500	400	400	400
Concession/Restroom/Storage Bldg	\$ 730,000				
Square Ft	2500 sq. ft.	2500 sq. ft.	2000 sq. ft.	2000 sq. ft.	2000 sq. ft.
Press Box	not stated				
Square Ft	not stated	100 sq. ft.	100 sq. ft.	100 sq. ft.	400 sq. ft.
Lighting:	\$ 420,000				
Lower and upper field improvements:	\$ 1,250,000				
Subtotal Construction Costs	\$ 6,420,000	\$ 8,363,411	\$ 8,206,427	\$ 6,270,978	\$ 5,963,443
Soft Costs	\$ 160,000	\$ 1,014,075	\$ 1,001,514	\$ 826,678	\$ 802,100
<i>% of Construction Costs</i>	2.5%	12.1%	12.2%	13.2%	13.5%
Unspecified					
Mobilization / Site Prep:	\$ 160,000				
• Contingency:	\$ 520,000	\$ 418,172	\$ 410,321	\$ 313,548	\$ 298,172
<i>% of Construction Costs</i>	8.1%	5.0%	5.0%	5.0%	5.0%
• Total:	\$ 7,100,000	\$ 9,795,658	\$ 9,618,262	\$ 7,411,204	\$ 7,063,715

Notes

with sod for natural fields
none stated

* Option 4 is the option the ASRSD School Committee has proposed for a vote
Option 1 is the original plan voted on last year, with new cost estimates